

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (cancelled)

2. (currently amended) An infusion system for infusing a fluid into a body of a user, the infusion system comprising:

a physiological monitoring device comprising:

a monitoring device processor;

a sensor coupled to the monitoring device processor and adapted to provide an output signal as a function of a concentration of an analyte in the user; and

a monitoring device communication circuit coupled to the monitoring device processor;

wherein the monitoring device processor is adapted to:

calculate an amount of the fluid to be infused into the user's body based upon the output signal; and

cause the monitoring device communication circuit to transmit a first set of data indicative of the calculated amount of the fluid to be infused; and

a medication infusion device comprising:

an infusion device processor;

a drive mechanism coupled to the infusion device processor and adapted to infuse the fluid into the body of the user; and

an infusion device communication circuit coupled to the infusion device processor and adapted to receive the first set of data from the monitoring device communication circuit;

wherein the infusion device processor is adapted to cause the drive mechanism to infuse the fluid into the body of the user in accordance with the first set of data indicative of the calculated amount of the fluid to be infused; and

The system of claim 1;

wherein the physiological monitoring device is adapted to be carried by the user on an exterior of the body of the user and the medication infusion device is adapted to be carried by the user on an exterior of the body of the user.

3. (original) The system of claim 2, wherein the infusion device processor causes the drive mechanism to infuse the fluid in accordance with the first set of data automatically after receipt of the first set of data by the infusion device communication circuit.

4. (original) The system of claim 2, wherein the physiological monitoring device is a blood glucose test strip monitor, and wherein the medication infusion device is an insulin infusion pump.

5. (original) The system of claim 2, wherein the monitoring device communication circuit includes one of a transmitter and a transceiver, and wherein the infusion device communication circuit includes one of a receiver and a transceiver.

6. (original) The system of claim 2, wherein the monitoring device further comprises an indicator coupled to the monitoring device processor and adapted to provide a notification of at least one event of the group consisting of: the measuring of the output signal produced by the sensor, the calculating of the amount of the fluid, and the transmitting of the first set of data by the monitoring device communication circuit.

7. (original) The system of claim 6 wherein the indicator includes at least one of a vibration alarm, a sound generation device, a panel adapted to display text, and a LED.

8. (original) The system of claim 2, wherein the monitoring device further comprises an indicator coupled to the monitoring device processor and adapted to provide a notification of the completion of at least one event of the group consisting of: the measuring of the output signal produced by the sensor, the calculating of the amount of the fluid, and the transmitting of the first set of data by the monitoring device communication circuit.

9. (original) The system of claim 2 wherein the monitoring device further comprises a user input device for inputting a command and wherein the monitoring device communication circuit transmits the first set of data in response to the command from the input device.

10. (original) The system of claim 2 wherein the monitoring device processor is further adapted to:

determine a first amount of time that has elapsed since the sensor provided the output signal; and

cause the monitoring device communication circuit to transmit the first set of data if the first amount of time does not exceed a predetermined amount of time.

11. (original) The system of claim 10 wherein the monitoring device further comprises a user input device for inputting a command and wherein the predetermined amount of time is established in response to the command from the input device.

12. (original) The system of claim 2 wherein the monitoring device further comprises: an indicator coupled to the monitoring device processor and adapted to provide a display of the amount of the fluid; and

a user input device for inputting commands;

wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit the first set of data in response to a first command from the input device.

13. (original) The system of claim 12 wherein the monitoring device further comprises a monitoring device memory coupled to the monitoring device processor and adapted to store at least two fluid infusion parameters, and wherein the monitoring device processor is further adapted to:

retrieve one of the at least two fluid infusion parameters from the memory in response to a second command from the input device associated with a selection by the user of the one of the at least two fluid infusion parameters; and

cause the monitoring device communication circuit to transmit the one of the at least two fluid infusion parameters.

14. (original) The system of claim 2 wherein the infusion device further comprises:
an indicator coupled to the infusion device processor and adapted to provide a display of the amount of the fluid; and
a user input device for inputting a command;
wherein the infusion device processor is further adapted to cause the drive mechanism to infuse the fluid into the body of the user in accordance with the first set of data in response to the command from the input device.

15. (original) The system of claim 2 wherein the infusion device further comprises:
an indicator coupled to the infusion device processor and adapted to provide a display of the amount of the fluid;
a user input device for inputting commands; and
an infusion device memory coupled to the infusion device processor and adapted to store at least two fluid infusion parameters;
wherein the infusion device processor is further adapted to:
retrieve one of the at least two fluid infusion parameters from the memory in response to a command from the input device associated with a selection by the user of the one of the at least two fluid infusion parameters; and
cause the drive mechanism to infuse the fluid into the body of the user in accordance with the one of the at least two fluid infusion parameters.

16. (original) The system of claim 2 wherein the monitoring device further comprises a monitoring device memory coupled to the monitoring device processor and adapted to store a first identification value associated with the identity of the infusion device,
wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit the first identification value;
wherein the infusion device communication circuit is further adapted to receive the first identification value; and

wherein the infusion device processor is further adapted to compare the first identification value with a stored identification value and to cause the drive mechanism to infuse the fluid into the body of the user in accordance with the first set of data if the first identification value is equal to the stored identification value.

17. (original) The system of claim 2, wherein the monitoring device further comprises a monitoring device clock circuit adapted to provide a monitoring device date and time; wherein the infusion device further comprises an infusion device clock circuit adapted to provide an infusion device date and time; wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit the monitoring device date and time; wherein the infusion device communication circuit is further adapted to receive the monitoring device date and time; and wherein the infusion device processor is further adapted to alter the infusion device date and time to be equal to the monitoring device date and time.

18. (original) The system of claim 2, wherein the monitoring device further comprises a monitoring device clock circuit adapted to provide a monitoring device date and time; wherein the infusion device further comprises an infusion device clock circuit adapted to provide an infusion device date and time; wherein the infusion device processor is further adapted to cause the infusion device communication circuit to transmit the infusion device date and time; wherein the monitoring device communication circuit is further adapted to receive the infusion device date and time; and wherein the monitoring device processor is further adapted to alter the monitoring device date and time to be equal to the infusion device date and time.

19. (original) The system of claim 2, wherein the monitoring device further comprises a user input device for inputting a first command and a second command, wherein the monitoring device processor is further adapted to:

receive the first and the second commands; and
cause the monitoring device communication circuit to discontinue transmissions
in response to the first command and to resume transmissions in response
to the second command; and
wherein the monitoring device processor is adapted to cause the monitoring device
communication circuit to transmit the first set of data after receipt of the second
command.

20. (original) The system of claim 2 wherein the monitoring device further comprises:
a user input device for inputting a command; and
a memory coupled to the monitoring device processor;
wherein the monitoring device processor is further adapted to:
cause the memory to store a value associated with a duration of time established
in response to the command from the input device; and
cause the monitoring device communication circuit to discontinue transmissions
until the duration of time has elapsed; and
wherein the monitoring device processor is adapted to cause the monitoring device
communication circuit to transmit the first set of data after the duration of time
has elapsed.

21. (original) The system of claim 2 wherein the monitoring device further comprises:
a user input device for inputting a command; and
a memory coupled to the monitoring device processor;
wherein the monitoring device processor is further adapted to:
cause the memory to store a value associated with a date and time established in
response to the command from the input device; and
cause the monitoring device communication circuit to discontinue transmissions
until the date and time have arrived;
wherein the monitoring device processor is adapted to cause the monitoring device
communication circuit to transmit the first set of data after the date and time have
arrived.

22. (original) The system of claim 2 wherein the infusion device further comprises a user input device for inputting commands,

wherein the infusion device processor is further adapted to cause the infusion device communication circuit to transmit a first command from the input device and a second command from the input device;

wherein the monitoring device communication circuit is further adapted to receive the first command and the second command;

wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to discontinue transmissions in response to the first command and to resume transmissions in response to the second command; and

wherein the monitoring device processor is adapted to cause the monitoring device communication circuit to transmit the first set of data after receipt by the monitoring device communication circuit of the second command.

23. (original) The system of claim 2 wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit a first command repeatedly for a plurality of transmissions;

wherein the infusion device communication circuit is further adapted to receive the first command; and

wherein the infusion device processor is further adapted to:

cause power to the infusion device communication circuit to be cycled whereby the power is removed from the infusion device communication circuit for a first time period and is restored to the infusion device communication circuit for a second time period; and

cause the power to the infusion device communication circuit to be restored and the power cycling to be discontinued if the first command has been received.

24. (original) The system of claim 23 wherein the infusion device processor is further adapted to resume the cycling of the power to the infusion device communication circuit after receipt of the first set of data following the receipt of the first command.

25. (original) The system of claim 23 wherein the infusion device processor is further adapted to resume the cycling of the power to the infusion device communication circuit after a predetermined period of time has elapsed after receipt of the first set of data following the receipt of the first command.

26. (original) The system of claim 23 wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit a second command after completion of the transmission of the first set of data;

wherein the infusion device communication circuit is further adapted to receive the second command; and

wherein the infusion device processor is further adapted to resume the cycling of the power to the infusion device communication circuit if the second command has been received.

27. (original) The system of claim 2 wherein the first set of data is further indicative of at least one of a medication delivery profile, a counter value, an elapsed time since the output signal was provided, an identification value associated with the identification of the infusion device, and a date and time of transmission of the first set of data.

28. (original) The system of claim 2 wherein the monitoring device further comprises a user input device for inputting a command,

wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit the command from the input device;

wherein the infusion device communication circuit is adapted to receive the command; and

wherein the infusion device processor is adapted to control the infusion device in accordance with the command.

29. (original) The system of claim 28 wherein the control of the infusion device comprises one of a medication delivery start time, a medication delivery profile, a medication delivery rate, a medication delivery amount, a cessation of a medication delivery, an activation of an alarm, a cessation of an alarm, a display of a text message, and a download of data.

30. (original) The system of claim 28 wherein the user input device comprises one of a button, a touch screen, a voice-activated device, and a menu structure shown on a display panel that is navigated by a keypad.

31. (original) The system of claim 2 wherein the monitoring device further comprises a user input device for inputting a plurality of commands during a time period, said plurality of commands comprising a programming session,

wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit the plurality of commands if the time period has elapsed;

wherein the infusion device communication circuit is further adapted to receive the plurality of commands; and

wherein the infusion device processor is further adapted to control the infusion device in accordance with the plurality of commands.

32. (original) The system of claim 2 wherein the monitoring device further comprises a user input device for inputting a plurality of commands corresponding to a programming session and for inputting a completion command corresponding to a completion of the programming session, and

wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit the plurality of commands if the completion command from the input device has been inputted;

wherein the infusion device communication circuit is further adapted to receive the plurality of commands; and

wherein the infusion device processor is further adapted to control the infusion device in accordance with the plurality of commands.

33. (original) The system of claim 2 wherein the monitoring device further comprises a user input device for inputting a plurality of commands corresponding to a programming session, wherein the monitoring device processor is further adapted to determine a calculated time period having a beginning time and an ending time, the beginning time corresponding to the entry of one of the plurality of commands, and the ending time corresponding to the earlier of a first event and a second event, the first event being the entry of a subsequent one of the plurality of commands, and the second event being the elapse of a predetermined amount of time; and wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit the plurality of commands if the calculated time period exceeds the predetermined amount of time; wherein the infusion device communication circuit is further adapted to receive the plurality of commands; and wherein the infusion device processor is further adapted to control the infusion device in accordance with the plurality of commands.

34. (original) The system of claim 2 wherein the monitoring device further comprises an indicator coupled to the monitoring device processor, wherein the infusion device processor is further adapted to cause the infusion device communication circuit to transmit a second set of data corresponding to an infusion device status; wherein the monitoring device communication circuit is further adapted to receive the second set of data; and wherein the monitoring device processor is further adapted to cause the indicator to display the infusion device status in accordance with the second set of data.

35. (currently amended) A medication infusion device for infusing a fluid into a body of a user and adapted for communications with a physiological monitoring device adapted to be carried by the user on an exterior of the body of the user and further adapted to provide an output signal as a function of a concentration of an analyte in the user, calculate an amount of the fluid to be infused into the user's body based upon the output signal, and transmit a first set of data indicative of the calculated amount of the fluid to be infused, the medication infusion device comprising:

a housing adapted to be carried by the user on an exterior of the body of the user;

an infusion device processor enclosed within the housing;

a drive mechanism coupled to the infusion device processor and adapted to infuse the fluid into the body of the user; and

an infusion device communication circuit coupled to the infusion device processor and adapted to receive the first set of data from the monitoring device;

wherein the infusion device processor is adapted to cause the drive mechanism to infuse the fluid into the body of the user in accordance with the first set of data indicative of the calculated amount of the fluid to be infused.

36. (original) The infusion device of claim 35, wherein the infusion device processor causes the drive mechanism to infuse the fluid in accordance with the first set of data automatically after receipt of the first set of data by the infusion device communication circuit.

37. (original) The infusion device of claim 35, wherein the physiological monitoring device is a blood glucose test strip monitor, and wherein the medication infusion device is an insulin infusion pump.

38. (original) The infusion device of claim 37, wherein the infusion device communication circuit includes one of a receiver and a transceiver.

39. (original) The infusion device of claim 35, wherein the monitoring device is further adapted to transmit a command selected by the user,

wherein the infusion device communication circuit is further adapted to receive the
command; and

wherein the infusion device processor is further adapted to control the infusion device in
accordance with the command.

40. (original) The infusion device of claim 39 wherein the control of the infusion device comprises one of a medication delivery start time, a medication delivery profile, a medication delivery rate, a medication delivery amount, a cessation of a medication delivery, an activation of an alarm, a cessation of an alarm, a display of a text message, and a download of data.

41. (currently amended) A physiological monitoring device adapted for communications with a medication infusion device carried by a user on an exterior of a body of the user for infusing a fluid into a the body of a the user, the physiological monitoring device comprising:

a housing adapted to be carried by the user on an exterior of the body of the user;

a monitoring device processor enclosed within the housing;

a sensor coupled to the monitoring device processor and adapted to provide an output
signal as a function of a concentration of an analyte in the user; and

a monitoring device communication circuit coupled to the monitoring device processor;

wherein the monitoring device processor is adapted to:

calculate an amount of the fluid to be infused into the user's body based upon the
output signal; and

cause the monitoring device communication circuit to transmit a first set of data
for reception by the infusion device, the first set of data being indicative of
the calculated amount of the fluid to be infused and adapted to cause the
infusion device to infuse the calculated amount of the fluid into the body
of the user in accordance with the first set of data.

42. (original) The monitoring device of claim 41, wherein the monitoring device is a
blood glucose test strip monitor, and wherein the medication infusion device is an insulin
infusion pump.

43. (original) The monitoring device of claim 42, wherein the monitoring device communication circuit includes one of a transmitter and a transceiver.

44. (original) The monitoring device of claim 41, wherein the monitoring device further comprises an indicator coupled to the monitoring device processor and adapted to provide a notification of at least one event of the group consisting of: the measuring of the output signal produced by the sensor, the calculating of the amount of the fluid, and the transmitting of the first set of data by the monitoring device communication circuit.

45. (original) The monitoring device of claim 41, wherein the monitoring device further comprises an indicator coupled to the monitoring device processor and adapted to provide a notification of the completion of at least one event of the group consisting of: the measuring of the output signal produced by the sensor, the calculating of the amount of the fluid, and the transmitting of the first set of data by the monitoring device communication circuit.

46. (original) The monitoring device of claim 41, wherein the monitoring device further comprises a user input device for inputting a command and wherein the monitoring device processor is adapted to cause the monitoring device communication circuit to transmit the first set of data in response to the command from the input device.

47. (original) The monitoring device of claim 41 wherein the infusion device is adapted to be controlled by a command and wherein the monitoring device further comprises:
a user input device for inputting the command,
wherein the monitoring device processor is further adapted to cause the monitoring device communication circuit to transmit the command for reception by the infusion device.

48. (original) The monitoring device of claim 47 wherein the user input device comprises one of a button, a touch screen, a voice-activated device, and a menu structure shown on a display panel that is navigated by a keypad.

Claims 49-63. (cancelled)